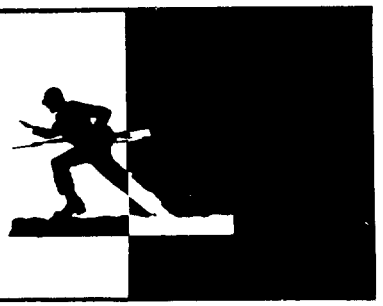
INFANTRY LETTERS



60mm MORTAR PRODUCTIVITY

U.S. Army airborne, air assault, and light infantry companies are authorized two M224 60mm mortars each, which are operated by six soldiers: a section leader, a squad leader, two gunners, and two assistant gunners who also double as ammunition bearers.

Each mortar includes an M225 cannon assembly (14.4 pounds), M7 circular baseplate (14.4 pounds), M170 bipod assembly (15.2 pounds), and M64 sight (3.5 pounds with case), for a total weight of 47.5 pounds.

Company mortars are routinely employed with a fire direction center (FDC), using gunner-sighted direct lay or squad leader-adjust techniques.

Austere staffing hampers mortar effectiveness in sector coverage and sustainability. Target engagement is line-of-sight (LOS), which eliminates terrain-immaterial indirect-fire coverage.

The absence of dedicated ammunition bearers can reduce the normal sustained rate of fire of about 20 rounds per minute. Firing the M720 high-explosive projectile (3.75 pounds) generates a logistical resupply burden of 75 pounds per mortar per minute of sustained engagement.

Increased staffing to provide an FDC capability (computer and radiotelephone operator) or a dedicated two-man ammunition resupply capability is not likely in the current era of force downsizing. It may be feasible, however, to reconfigure the 60mm mortar capability and save two crew spaces in the process.

Two 60mm mortars could be spliced into a single crew-operated fire unit by doing the following:

- Mount both cannons side-by-side on one M7 circular baseplate, using a plug-in, dual-socket adapter that permits both cannons to rotate at the same time.
- Install a dual-cannon collar on the bipod assembly.
- Use fixed, bi-azimuth cannon alignment.

One gunner could traverse and elevate both cannons. Loading could be accomplished by one assistant gunner.

Eliminating one baseplate, bipod assembly, and sight would reduce the two-mortar weight from 95 to 62 pounds. The new dual-socket baseplate adapter and dual-collar bipod mounting would offset some of the weight savings.

The overlap of burst lethal areas would be range-variable. For example, mounting cannons with a fixed 10-mil divergence between firing azimuths would yield a 10-meter distance between burst points at a range of 1,000 meters. Burst point interval would increase to 30 meters at 3,000 meters. The precise azimuth divergence between cannons would be determined after study of target coverage and engagement range considerations.

RICHARD K. FICKETT
Herndon, Virginia

1993 INDEX
The 1993 index to INFANTRY is available to anyone who requests a copy. Please address your requests to Editor, INFANTRY, P.O. Box 2005, Fort Benning, GA 31905-0605.

ARMY SCIENCE CONFERENCE

The 19th Army Science Conference will be held 20-24 June 1994 in Orlando, Florida. The theme for the conference is "Assuring the Competitive Edge."

The biennial conference is intended to provide a forum for the presentation, discussion, and recognition of significant accomplishments by U.S. Army scientists and engineers in their efforts to support tomorrow's combat soldier. The 1994 conference will feature the presentation of 120 papers and posters judged best among those submitted. Exhibits will be available throughout the conference to demonstrate the latest technologies in government laboratories and research, development, and engineering centers.

Anyone who is interested in applications or additional information may FAX a request to Army Science Conference Registration Desk, (804) 255-0056, including complete mailing address, telephone and FAX number; or call me at (804) 255-0409.

BRENDA K. VAUGHAN
Assistant Technical
Conference Manager

ARMY AVIATION ASSOCIATION CONVENTION

The Army Aviation Association of America (AAAA) will hold its annual convention 20-24 April 1994 in St. Louis, Missouri. The theme will be "Army Aviation: Advancing on the 21st Century."

The program will feature two special-focus panels, one on operations and training and the other on acquisition and logistics.

Additional information is available from AAAA, 49 Richmondville Avenue, Westport, CT 06880-2000; telephone (203) 226-8184, FAX (203) 222-9863.

BILL HARRIS